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ABSTRACT

A purposeful sample of four comprehensive urban high schools involved in educational restructuring initiatives was analyzed to determine how each site has implemented educational restructuring efforts and how vocational education fits into those restructuring efforts. The four sites studied were as follows: Bryan High School in Omaha, Nebraska; Humboldt Secondary Complex in St. Paul, Minnesota; Mayfield High School in Las Cruces, New Mexico; and West Charlotte High School in Charlotte, North Carolina. The sites were selected on the basis of four criteria: membership in the Urban Schools Network; presence of regular and vocational offerings; presence of school-restructuring activities; and interest in participation. Data were collected through the following methods: onsite observations; interviews with key stakeholders (teachers, students, parents, administrators, employers, and others); and review of pertinent documents and records. At three sites, economic viability appeared to be the primary motive for restructuring. Societal equality appeared to be the primary motive for restructuring at the fourth site. No school had addressed the need to evaluate the impact and outcomes associated with restructuring. Vocational education's involvement was related to the following: infusion of Perkins funding, development of integrated courses, tech prep, school-to-work activities, career academies, and the implementation of a career planning portfolio program for all students. (Contains 10 references.) (MN)

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CASE STUDIES OF URBAN SCHOOLS: PORTRAYALS OF SCHOOLS IN CHANGE

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A case study is expected to catch the complexity of a single case. A single leaf, even a single toothpick, has unique complexities—but rarely will we care enough to submit it to case study. We study a case when the case itself is of very special interest. We look for detail of interaction with its contexts. Case study is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances.

Robert E. Stake (1994)

EXECUTIVE SUMMARY

This document describes the findings of a research project entitled "Case Studies of Urban Schools," a National Center for Research in Vocational Education study. The project was designed to describe how a small group of comprehensive high schools in urban areas are developing, implementing, and evaluating educational restructuring initiatives that include vocational education as a key component of those efforts.

Qualitative research methodologies were employed to describe the contextual factors that both facilitate and impede the restructuring-related actions taking place in each of these schools. The two primary research questions addressed in this document are (1) How has each site implemented educational restructuring initiatives? and (2) How does vocational education fit into those restructuring efforts? The case studies serve to explain the socio-environmental context, relationships, and processes that existed in each of the four sites that enabled the schools to change their form and function in an attempt to enhance the school and postschool outcomes of all students.

This monograph gives the reader an overview of the project and provides a literature review discussing previous educational restructuring theories and initiatives. This literature review describes previous educational restructuring research initiatives, educational restructuring efforts specific to urban areas, and educational restructuring related to vocational education. Based on information gleaned from the literature reviewed, the refinement of an analytical framework designed to assist with data analysis and interpretation is posited. There is also a description of the processes and procedures each of the partner-sites utilized to develop, implement, and evaluate restructuring initiatives.

Finally, a cross-site analysis is presented of the themes that emerged during data analysis that were consistently identified, either implicitly or explicitly, by the four partner-sites as key elements associated with educational restructuring actions. This document will extend the individual case study findings and will assist the investigators in inducing a practically derived theory and description of existing educational restructuring initiatives.

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INTRODUCTION

While comprehensive public high schools are the most common form of secondary-level schools in urban settings, they are among the least successful public institutions in the United States (Hill, Foster, & Gendler, 1990). According to Hill, Foster, and Gendler (1990), "As a result of low achievement, dropping out, and educational failures, fewer than half of all urban minority children earn diplomas, and many graduate poorly prepared for work or higher education" (p. v). Although vocational education offers considerable promise for many students that have not been well-served through traditional secondary-level programmatic offerings, the value of vocational education programs in urban comprehensive high schools serving diverse student populations is not completely understood (Stern, Finkelstein, Stone, Latting, & Dornsife, 1994; Wagner, 1991). In 1995, NCRVE researchers began to study a small but select number of urban comprehensive high schools to discover, understand, and explain the process of restructuring. For the purposes of this study, restructuring was defined as the core elements and processes of program development and transformation those schools have undergone in an attempt to increase positive school and postschool outcomes for students.

This study analyzes a purposeful sample of four comprehensive urban high schools involved in educational restructuring initiatives. Selected sites have incorporated vocational education into systemic educational restructuring efforts to better serve diverse student populations. Case study methodologies (Yin, 1989) were utilized to explain the formative processes, relationships, and contextual facilitators that have resulted in the development and implementation of innovative and promising practices.

These case studies have illuminated emerging vocational education practices within comprehensive urban high schools that have influenced the restructuring actions undertaken within those schools. This study has been guided by a Steering Committee of urban practitioners and researchers who have experience in the area of urban educational restructuring. The Steering Committee assisted in selecting the urban comprehensive school sites to be studied, facilitating the entrance into selected sites, validating the research questions and data collection methods utilized, and reviewing and critiquing project reports. The Steering Committee met formally each year of the project.

Initial Formative Research Questions

Two primary research questions guided this investigation: (1) How has each site implemented educational restructuring initiatives? and (2) How does vocational education fit into those restructuring efforts? The answers to these questions are both complex and elusive. In order to attempt an answer, respondents were required to address, in a chronological format, the processes that each partner-site undertook to successfully implement restructuring initiatives.

In addition to the two primary questions listed above, the following four secondary questions were identified in order to collect more specific information about each of the partner-sites: (1) What are the core elements and processes of program development and transformation that produce innovative and promising practices for diverse populations of students? (2) What are the organizational mechanisms, policies, and practices that result in valuable education and employment outcomes for diverse populations of students? (3) What relationships exist among school resources, activities, stakeholders, and expected student outcomes? and (4) What works in effective comprehensive urban schools that have included vocational education in systemic restructuring efforts to successfully serve diverse populations of students? In other words, what was done (the interventions applied), to whom (urban high schools serving diverse populations of students with varying and multiple needs), and with what effects (the educational and employment outcomes attained by those students)?

METHODOLOGY

As previously mentioned, this project describes how four comprehensive high schools in urban areas are changing to better meet the needs of the students enrolled there. Project staff developed a working relationship with four partner-site schools that are members of the National Center for Research in Vocational Education's (NCRVE's) Urban Schools Network. The Urban Schools Network, initiated in 1991, includes 30 teams of secondary and postsecondary educators and business partners from around the United States that have been working with NCRVE to implement either formal Tech Prep programs designed to connect secondary and postsecondary vocational education programs or develop integrated academic and vocational education curricula. During 1995 and 1996,

four comprehensive high schools from different Urban Schools Network teams were identified as partner-sites and visited by project staff along with a team of external researchers.

This study used two qualitative methods: (1) thematic content analysis of extant state-level policy documents; and (2) interviews with key individuals to identify, describe, and explain the most current methods and strategies utilized by state education and vocational rehabilitation agencies to implement integrated state-level transition policies. These methods yielded contextual information explaining the implementation of restructuring activities at each of the partner-sites. In addition, this study clarifies how implementation of various restructuring efforts within each of the partner-sites are being evaluated.

The involvement of the Steering Committee, a description of the site selection process, and the data collection and analysis procedures will be described below. Case study methodology (Yin, 1989) was utilized throughout this study, along with interviews and observations of faculty and staff from the partner-sites. All methods received prior approval of the Human Subject Committee of the University of Illinois at Urbana-Champaign.

Steering Committee

Each step in this study has been guided by a Steering Committee made up of practitioners from urban sites where programs have been transformed. In addition, the Steering Committee included national experts familiar with the study of urban schools, educational restructuring, and vocational education. The Steering Committee has aided in the selection of school sites to be studied, validated the research questions and data collection methods utilized, reviewed and critiqued proposed deliverables, and facilitated the entrance into selected urban school sites. The entire Steering Committee has met formally once each year of the project and has had periodic telephone conferences.

Site Selection

One of the initial tasks of this study involved the selection of the four partner-sites. According to Stake (1994), "Perhaps the most unique aspect of case study in the social sciences and human services is the selection of cases to study" (p. 243). The investigators utilized the expertise of the NCRVE Urban Schools Network staff and the members of the project Steering Committee to identify and gain access to four urban comprehensive high schools that have documented restructuring actions that include vocational education.

In order to facilitate access and entry into the four sites, it was determined a priority that the sites be selected from members of the NCRVE Urban Schools Network. The Urban Schools Network is a loose affiliation of approximately 30 teams from urban centers across the United States that have applied to attend weeklong summer institutes conducted by NCRVE. The teams generally include high school representatives, along with representatives from community colleges, technical colleges, and business and industry. The focus of the NCRVE Urban Schools Network initiative has been providing teams with training and technical assistance on implementing Tech Prep and integrating academic and vocational programs.

The site selection process occurred in three waves. Initially, 19 comprehensive high schools were identified as members within the 30 Urban Schools Network teams. Second, based on application information provided to NCRVE, project staff identified seven of the initial 19 schools that had provided descriptions of restructuring actions as part of their application to NCRVE to become members of the Urban Schools Network. Finally, the Steering Committee met to identify the four schools that would be included in this study. Although not explicitly stated as selection criteria, the Steering Committee attempted to select sites from different regions of the country that served different populations of students.

Each of the partner-sites selected to participate in this study met the following four criteria: (1) they were members of the NCRVE's Urban Schools Network, (2) they are comprehensive high schools that include both regular and vocational course offerings, (3) they have initiated school restructuring activities, and (4) they expressed interest in participating in the study. The partner-sites selected by the Steering Committee include Bryan High School in Omaha, Nebraska; Humboldt Secondary Complex in St. Paul,

Minnesota; Mayfield High School in Las Cruces, New Mexico; and West Charlotte High School in Charlotte, North Carolina.

Data Collection

In order to validate the data collected through the in-depth case studies of the four selected sites, multiple methods of data collection were utilized, including on-site observations, interviews with key stakeholders (e.g., teachers, students, parents, building and district-level administrators, employers, and others), and review of pertinent documents and records. During the fall of 1995, a team of at least three NCRVE researchers spent three days at each site. Observations within the partner-sites were conducted to describe the socio-environmental context, relationships, and interactions that exist and take place within each school setting. Semi-structured interviews were conducted with key stakeholders to ascertain their views of the processes and procedures that were developed and implemented regarding educational restructuring and emerging vocationalism. Finally, review of school-level policies and procedural documents, follow-up studies, and district-level policy documents were conducted to trace the development and implementation of policies that were designed to facilitate educational restructuring and foster the development of vocational education to successfully serve diverse populations of students. During the spring semester of 1996, NCRVE researchers returned to each site to collect additional data and clarify information that was previously collected.

Data Analysis

The data collected was analyzed using two methods. First, the field notes collected during on-site observations at the participating school sites and the interviews with key stakeholders were analyzed qualitatively in order to identify emergent themes. Then, the pertinent records and documents reviewed during data collection will be analyzed through thematic content analysis. Thematic content analysis is a qualitative data analysis method designed to extract consistent themes from a wide range of written or verbal communication (Williamson, Karp, Dalphin, & Gray, 1982). The data collected through on-site observations and interviews with key stakeholders was triangulated with the themes that emerged from reviewing other pertinent documents.

CASE STUDIES

This section provides case study vignettes of the individuals and processes involved in developing, implementing, and evaluating restructuring activities at each of the four partner-sites. Obviously, five to ten pages of narrative per site cannot address all of the issues that arose and events that occurred as the partner-sites grappled with educational restructuring initiatives over the past five years. In addition, we acknowledge the limited scope and depth of our understanding of those issues and events and those gatekeepers and stakeholders that facilitated restructuring activities and hurdled all of the barriers that arose as each of the partner-sites attempted to change. However, we believe that these vignettes highlight some of the major issues and events that transpired at each of the partner-sites and illuminate the persistence and commitment exhibited by faculty at those sites to ensure that the needs of students are being met.

Readers wishing more detailed information are asked to contact the sites directly. In addition, the authors of this report are willing to share their insights of the schools and their restructuring efforts.

Bryan High School
Omaha, Nebraska

William Jennings Bryan Senior High School (Bryan) is located in southwest Omaha, Nebraska. It is one of 11 public secondary schools operated by the Omaha Public Schools (OPS). Seven of those schools, including Bryan, are comprehensive high schools housing both academic and vocational course offerings; three are considered alternative schools serving students who elect a nontraditional secondary school experience; and one is a vocational center providing specific vocational education instruction to students from the entire OPS catchment area.

Bryan opened in 1965 as a combined junior-senior high school. However, by 1967, it was apparent that the student population at Bryan would increase to over 1,700 students—a number that OPS felt was too large to address in a single facility. In 1968, OPS decided to construct another building in close proximity to the combined junior-senior

high school and separate the two. The current Bryan High School facility was opened in 1971 and has been structurally unchanged since that time.

Bryan draws the majority of its student population from one junior high school, which, in turn, draws students from three elementary schools. In order to attain and maintain a more representative student population reflecting the demographics of the city of Omaha, OPS transports students from diverse ethnic backgrounds to Bryan from throughout the city based on a district-level open enrollment policy designed to foster racial integration. According to a document developed by Bryan faculty, "The student body [attending Bryan] is a microcosm of the national population of middle income wage earners and reflects the entire range of SES [socioeconomic status] and demographics of Omaha."

Bryan currently serves slightly less than 1,200 students enrolled in grades 9 through 12. Approximately 30% of the Bryan student population are from minority ethnic backgrounds. African-American students represent the largest portion of that 30% and make up approximately 16% of the total Bryan student population. During a recent school year, 34% of the student population participated in free or reduced-price lunch program, 47% of the student population was female, and 10% of the student population was enrolled in special education programs.

The Bryan campus is surrounded by open spaces where the city of Omaha co-mingles with suburban Omaha housing subdivisions, other less urban municipal boundaries, and rural fields and open spaces. The red brick, two-story school is a clean, appealing, active place built on a large lot containing a number of athletic fields, including a football stadium with aluminum bleachers and a 400-meter track. Although Bryan is within the city limits of Omaha, an initial impression of the site visit team was the suburban nature of the school setting. Looking out the windows of Bryan, the view is dominated by rolling hills made up of suburban housing developments and fields rather than the skyline of an urban center.

Inside, the building is dominated by long hallways and a large central open space outside of the administrative offices, affectionately known to students and faculty as the "pit." The pit appears to be the center of school activity and is a place for students to congregate before school, during breaks between classes, as a second overflow cafeteria during lunch, and is used as a practice facility for a number of school organizations such as

pom pon and cheerleading squads after school. In addition to the pit, Bryan houses a sunny open cafeteria that includes a wall of windows with southern exposure and a modern carpeted library facility. The entire Bryan building is currently in the process of becoming hardwired for classroom and office access to the internet for instructional purposes.

Bryan initiated current restructuring activities during the 1991-1992 academic year. During that year, OPS allotted a large portion of its Carl D. Perkins Vocational and Applied Technology Education Act of 1990 secondary-level funding to establish a three-year project entitled Careers 2000, in keeping with then President Bush's America 2000 educational goals schema. Bryan and another high school in OPS were awarded $150,000 each to plan Careers 2000 activities during the first year of the project.

This funding was specifically earmarked to improve vocational education programs and to begin integrating academic and vocational courses at the two designated high schools. At Bryan, these two broad objectives were solidified, according to a school brochure, into "changing schools to prepare students for future careers."

In order to successfully accomplish the objective of better preparing students for careers, faculty at Bryan developed five project goals:

1. Provide secondary educators with opportunities and experiences which facilitate the integration of academic, vocational, and applied technology education.

2. Increase work-skill attainment and job-placement competencies for *all* students.

3. Expand and enhance long-term linkages between the school district, the workplace, community-based agencies, and postsecondary institutions.

4. Improve the successful participation of all students in coherent course sequences integrating academic and vocational education.

5. Increase the relevance of secondary education to the workplace, to emerging workplace needs, and to a full spectrum of postsecondary opportunities.

These goals are still driving restructuring efforts and activities at Bryan today.

A portion of the funding was used to hire a Careers 2000 coordinator. The Careers 2000 coordinator is a teacher who functions primarily as a conduit for information dissemination between the OPS central administration and the Bryan faculty and administration. As will be further discussed, hiring a Careers 2000 coordinator to facilitate the flow of information and assist with organizing various activities appears to be a crucial factor associated with implementing lasting restructuring efforts at Bryan. The remainder of the Careers 2000 funding was used to provide travel funds for teachers to attend inservice training programs and educational restructuring-related conferences; to fund mini-grants within the school for various development activities such as course development; and to purchase equipment related to the Careers 2000 goals.

Since the 1991-1992 school year, the Bryan staff has concentrated on implementing five interrelated restructuring activities:

1. *Advisement*. This program provides each student with up to four years of daily mentoring with at least one staff member. Advisement groups maintain a student to staff ratio of approximately 16 to 1. Fifteen minutes of every school day are allotted to advisement.

2. *Career Clusters*. Career clusters are groups of related classes offered to students attending Bryan High School that are designed to provide linkages between those related courses. Five clusters have been identified at Bryan: (1) arts and humanities; (2) business/information systems; (3) human services; (4) engineering technology; and (5) public/human services.

3. *Block Scheduling*. In order to reconfigure the traditional schedule to allow more uninterrupted time for instruction, the school day is made up of fewer class periods that are longer than the traditional 50-60 minute period. Bryan currently schedules four ninety-minute classes per day and operates courses on a semester basis rather than the traditional yearlong basis. Students receive a unit for passing a one semester class that lasts for 90 minutes rather than receiving a unit for a 50-minute class offered the entire year.

4. *Write Stuff*. The Write Stuff is an interdisciplinary program designed to encourage student writing across all subject areas. The faculty has received inservice training and is encouraged to integrate writing activities in all courses offered at Bryan.

5. *Career Options Plus*. This is the terminology Bryan High School uses for Tech Prep. The program is designed to foster student transition by articulating high school courses with programs and courses offered at postsecondary institutions such as community colleges and universities. The goal of linking courses is to both coordinate and recognize the instruction students received in high school at the postsecondary level.

Although each of these activities has altered the structure of education provided students at Bryan, it was apparent to the site visit team that developing and implementing the block schedule became the overarching restructuring initiative at Bryan. The remainder of this discussion will focus primarily on the development and implementation of the block schedule at Bryan, although the other restructuring activities will be discussed as they relate to block scheduling.

The Block

Chronological Synopsis

As previously mentioned, beginning in the 1991-1992 academic year, Bryan was awarded $150,000 per year for a three-year period by the state of Nebraska, utilizing 1990 Perkins Act funds to develop a Careers 2000 initiative. At the beginning of that school year, a Careers 2000 steering committee was initiated at Bryan to help guide and plan how to proceed with developing and implementing objectives and goals related to changing schools to prepare students for life after high school, particularly in the domain of postschool employment. In addition to the creation of the steering committee, a number of subcommittees were convened around issues relevant to the Bryan staff: career infusion/ integration, curriculum and instruction, learning climate, standards/performance-based education, technology, and time management/resources. Every teacher at Bryan volunteered to serve on one of the subcommittees. The steering committee and subcommittees initially focused on planning and development activities.

During the 1991-1992 academic year, and continuing through the 1994-1995 academic year, OPS approved a plan where Bryan would have five "late start days" per year. Late start days were normal starting school days for teachers that would not start for students until 10 a.m. to facilitate faculty participation in committee meetings. Late start days ensured that teachers could all attend meetings during normal school hours without the

distractions of meeting before or at the end of the school day when extracurricular activities often dominate teacher schedules. A number of the faculty at Bryan expressed the value of having extended meeting time with other teachers as one of the primary keys to the ultimate success of arriving at and implementing block scheduling.

According to one teacher, during the initial meetings that took place on late start days, the steering committee and subcommittees spent time brainstorming about, "where Bryan was and where Bryan wanted to be." An administrator from Bryan, describing the initial year of steering and subcommittee meetings, made the telling statement, "that we knew we didn't want to make Bryan a magnet school of any kind, we wanted to make it a magnetic school." A number of ideas were generated, including the decision by the time management/resources subcommittee to explore alternative scheduling formats to the traditional seven-period high school day.

In addition to receiving the Careers 2000 funding, Bryan, along with other educational institutions and organizations in Omaha (e.g., Benson High School, Metropolitan Community College, and the Omaha Jobs Clearinghouse), concurrently applied and was asked to become a member of the National Center for Research in Vocational Education (NCRVE) Urban Schools Network. As a member of the NCRVE Urban Schools Network, a small number of the Bryan faculty and other members of the Omaha Urban Schools Network team received funding to spend two weeks during the summer in Berkeley, California, addressing the planning and development of Tech Prep initiatives (Career Options Plus) in Omaha. Various faculty from Bryan attended these institutes the four summers from 1992 through 1995.

The focus of the NCRVE Urban Schools Network summer institutes was to provide a group of secondary and postsecondary educators and other interested individuals such as business partners and adult service providers from 30 urban communities the opportunity to develop either integrated academic and vocational curriculum or solidify articulated Tech Prep programs. At the institutes, staff from NCRVE and team facilitators provided each team with structured time and technical assistance to develop plans that could then be transported home to their localities for implementation. This type of leadership development model is common in both vocational and special education systems throughout the United States.

As previously mentioned, Bryan was part of a team from Omaha focusing on developing formal articulated Tech Prep programs between the two high school team members, Metropolitan Community College and the Omaha Jobs Clearinghouse. The Omaha Jobs Clearinghouse, housed at Metropolitan Community College, is a resource office designed to assist youth and young adults in gaining access to jobs or occupational relevant training. Although the team from Omaha did develop, and has subsequently implemented, articulated Tech Prep course sequences, at the initial summer institute, faculty from Bryan informally learned about block scheduling. According to one teacher who had attended more than one summer institute, "the workshops and planning sessions [provided at the institutes] were good, but we learned a ton just by talking with people in the hallways of the hotel." It appears that the focus of the informal discussions held by faculty from Bryan at the NCRVE summer institutes, particularly the institute held during the summer of 1992, revolved around the development and implementation of block scheduling.

During the 1992-1993 academic year, Bryan continued to use late start days to facilitate committee and subcommittee meetings. In addition, the Career 2000 coordinator spent a considerable portion of his time locating information and resources, both human and material, regarding block scheduling. According to one of the teachers our site visit team interviewed, "1992-93 was the year that a large percentage of the Bryan staff embraced block scheduling." It appears that during the second year of the project, block scheduling superseded the other restructuring related activities occurring at Bryan.

During the third year Bryan received Career 2000 funds, the Bryan and OPS administrations began backing block scheduling, and teachers at Bryan began debating whether they wanted to switch to block scheduling or retain the traditional seven-period school day. During this academic year, late start days included meetings of the entire Bryan faculty to debate the value of block scheduling. Early in the spring of 1994, the teachers at Bryan voted, 78%, to switch to block scheduling during the 1994-1995 academic year, and implementation of that effort dominated faculty efforts from that point until the start of the 1994-1995 school year.

Throughout this process, the Bryan and OPS administrations allowed the entire process related to block scheduling to remain a teacher-directed activity. The administrations provided support to the Bryan faculty by allowing late start days and funding to explore how other schools had implemented block scheduling. However,

neither the Bryan nor the OPS administrations pushed Bryan towards implementing block scheduling.

Obviously, not all of the faculty at Bryan voted to implement block scheduling. As the vote approached, the Bryan and OPS administrations assured teachers at Bryan that if they did not feel they could effectively teach children within the block schedule format, they would be assisted in attempting to transfer to other schools within OPS. Very few instructors elected to leave Bryan after the vote; however, the offer to assist those that did not feel their skills were best matched with the block schedule format, continues to be provided along with the opportunity to seek a transfer within OPS.

Since the start of the 1994-1995 academic year, the faculty at Bryan have been grappling with issues associated with implementing block scheduling. Many unforeseen issues related to implementing block scheduling, such as meshing the Bryan course schedules with the computerized OPS scheduling system, have been problematic, yet creative solutions have been, and are currently being, developed. The synergistic energy that emerged from the faculty at Bryan provides assurance that regardless of what barriers emerge in the future, the Bryan staff will be equipped to hurdle those barriers together. The democratic teacher-driven process utilized to develop and implement block scheduling at Bryan appears to have been institutionalized in that setting. This process could, and most likely will, serve Bryan well in the future.

Restructuring Facilitators

Based on the observations, interviews, and records reviewed by the team that visited Bryan during the fall semester 1995, three restructuring facilitators emerged: (1) administrative support, (2) teacher-driven action, and (3) seed funding. Each of these facilitators will be discussed individually below.

Both the Bryan and OPS administrations provided support to the restructuring efforts undertaken by the teaching staff at Bryan. The OPS administration provided Bryan with financial resources to explore alternative forms and methods of providing instruction to secondary-level students. The Bryan administration was supportive of the faculty decision to implement block scheduling and also provided "an out" or, in other words, an opportunity, for faculty who believed they could not effectively teach kids in a block format

to seek a parallel position at another school within OPS. In addition, the Bryan administration excelled in the facilitator role, allowing the faculty to develop a number of teacher-driven initiatives without feeling the need to claim ownership or mold those initiatives to meet top-down administrative needs or desires. The restructuring efforts at Bryan, particularly the implementation of the block schedule, were and continue to be collaborative actions between the faculty at Bryan, Bryan administrators, and OPS.

The second facilitator of restructuring actions was the democratic nature of those actions. All teachers at Bryan had the opportunity to participate in every step taken to restructure how Bryan educates its students. We were impressed by the willingness of teachers at Bryan to share their honest opinions about the successes and potential pitfalls associated with the restructuring efforts. In addition, we were impressed by the respect that all of the Bryan staff showed each other—whether they strongly agreed or disagreed with the statements being made—in a series of small group meetings held with the site visit team. The faculty at Bryan exude a sense of ownership of the school. What has occurred and is occurring at Bryan is a palpable example of what can transpire when teachers are given the opportunity to restructure their school to better meet the educational and postschool requirements of the students they serve.

The third restructuring facilitator that we believe assisted the efforts at Bryan relates to the initial Careers 2000 funding that Bryan was fortunate enough to receive. This funding provided Bryan with seed money to hire a Career 2000 coordinator who facilitated information dissemination, provide funding for staff to attend various conferences with topical themes related to the restructuring activities, and provide staff opportunity to develop mini-grants related to the various restructuring efforts being discussed at Bryan. Each of these actions were timely and ultimately assisted the development and implementation of Bryan's restructuring efforts.

Restructuring Barriers

Although Bryan has accomplished the implementation of a major, and a number of minor, schoolwide restructuring efforts over the past five academic years, the site visit team identified three barriers that the staff is still struggling to answer or overcome: (1) loss of momentum, (2) inservice programs, and (3) evaluation. Each of these barriers will be detailed individually.

A number of the teachers interviewed by the site visit team stated that they haven't felt the same type of intensity regarding restructuring during the 1995-1996 academic year. We recognize this lack of momentum may be a natural "down time" that occurs after an organization has gone through a tremendous period of change. However, many of the teachers expressed the desire to continue pressing for additional restructuring activities to better meet the needs of the Bryan student population. Some areas of concern identified by the Bryan staff included universally solidifying the advisement program, increasing the opportunity to incorporate team teaching into the block scheduling format, and providing the opportunity to re-visit the merit and worth of block scheduling. Each of these concerns could be viewed as the springboard to new restructuring efforts at Bryan.

A number of the Bryan staff felt that they needed additional inservice training on "how to effectively teach students for 90-minute periods." Corresponding to this identified need for continuing inservice instruction, many teachers also felt that Bryan should continue to hold the late start days, which had been discontinued during the 1995-1996 academic year, to facilitate schoolwide discussion of topical issues related to block scheduling and the other restructuring objectives previously mentioned. It may be possible for Bryan to continue holding late start days, using a portion of the time to hold schoolwide or committee meetings and using the remainder for inservice training.

Another area of concern identified by the site visit team is the need for intensive formative and summative evaluation efforts to be undertaken regarding the processes and outcomes associated with the move to block scheduling and some of the other restructuring efforts undertaken. By conducting formative evaluation efforts focused on the process of implementing block scheduling, Bryan faculty could potentially identify areas of concern and alter systems to better meet student needs. In addition, summative evaluation efforts should be initiated to examine the overall effectiveness of restructuring actions. Evaluation efforts that involve the entire Bryan staff may also be a method utilized to recapture the level of effort that was exhibited during the past five academic years.

Finally, it should be noted that the site visit team sensed a strong desire by all of the individuals we met in Omaha to prepare students to be successful in their adult lives. This desire, we believe, has been translated into action throughout OPS. Organizational and structural change is difficult to initiate and even more difficult to accomplish; however, true restructuring actions have been developed and implemented at Bryan.

Humboldt Secondary Complex
St. Paul, Minnesota

Humboldt Secondary Complex (Humboldt), formerly Humboldt High School, opened in 1889 and is one of the oldest public high schools in St. Paul, Minnesota. Humboldt is one of ten high schools operated by the St. Paul Public Schools. Six of those ten high schools, including Humboldt, are comprehensive in nature, housing both academic and vocational course sequences. The other four provide alternative educational options for students, including a school specifically designed to meet the needs of teen parents, an open school, and an Area Learning Center stemming from a State of Minnesota dropout prevention initiative.

Humboldt is a 316,000 square-foot complex built on 16 acres in southwest St. Paul in an area known as "South Seventh Street." The complex consists of two buildings, connected by a large cafeteria, surrounded by a number of athletic fields and open space. Humboldt is nestled in the middle of an established urban residential neighborhood that houses primarily low and middle socioeconomic status families. The older portion of the red brick complex was constructed in 1909, with major additions in 1924 and 1959. The newer portion of the complex opened in 1976 as a combined junior-senior high school. During the 1976-1977 academic year, the older portion of the complex was renovated; and in the fall of 1977, the junior high grades (7-9) split from the senior high and each existed as separate entities until the early 1980s.

In the fall of 1981, Humboldt Senior High added ninth grade to become a four-year secondary school. In 1982, one year after the addition of ninth grade, the St. Paul Public Schools merged the junior and senior high school programs, creating the current Humboldt Secondary Complex configuration. The complex currently houses a distinct middle school, which includes grades 7 and 8, and also a distinct high school, which includes grades 9 through 12. Although most middle schools include grades 6 through 8, Humboldt Middle School houses only students enrolled in grades 7 and 8 because of space limitations at the facility.

Although the middle and senior high schools exist as discrete entities, they share administrations and other educational professionals. In addition to sharing professionals, accelerated students enrolled in the middle school have, in the past, been able to enroll in

courses at the high school. The unique configuration of the Humboldt complex is ideal for allowing students the opportunity to travel between traditional middle and senior high schools depending on their abilities and needs.

The student population attending Humboldt is very diverse. Humboldt serves approximately 1,300 students per year, 450 enrolled in the middle school (grades 7 and 8) and 850 enrolled in the high school. During a recent school year, 60% of the students attending Humboldt were from diverse racial and ethnic backgrounds, including Hispanic, Asian American, Native American, and African American. The diversity of the Humboldt student population is reflected in the International Studies and Careers specialty program implemented at the school, which will be discussed in more detail later.

Humboldt also provides services to a large number of students enrolled in special education programs. The special education department at Humboldt is the largest secondary-level special education program in the St. Paul Public Schools and is the home school to many students with low incidence disabilities. The special education students enrolled at Humboldt are almost completely included in the milieu of the school. According to a published description of Humboldt, during a recent school year, there were more visitors observing the special education program at Humboldt, examining how they deliver services, than at any other school in the State of Minnesota.

Humboldt draws the majority of its students from the South Seventh Street area. However, the City of St. Paul and the state of Minnesota both have open enrollment policies that allow students and their parents considerable flexibility in selecting and attending the public school of their choice. The open enrollment policy allows students the opportunity to attend schools outside of their geographic district catchment area. Therefore, some students that attend Humboldt do not live in the nearby area or within the St. Paul Public Schools boundary.

Open enrollment has both a positive and a negative impact on Humboldt, according to the faculty. Positively, open enrollment allows students, along with their parents, the option to select a school of their choice based on the programs and instruction offered. However, according to a number of administrators and faculty members interviewed, Humboldt experiences approximately 30% student mobility in any given academic year,

which tends to erode program stability and is viewed as a significant problem by the school district.

Each of the comprehensive high schools in the St. Paul Public Schools system has an area of emphasis or "specialty program." At Humboldt, the focus is on an International Studies and Careers (ISC) specialty program. According to a Humboldt brochure, the ISC program, developed at Humboldt Secondary Complex, welcomes 7th and 9th graders who have expressed interest in pursuing an internationally related career or in a college preparatory program that provides a background for majoring in International Studies at the postsecondary level.

Students in the ISC program enroll in a four- or six-year sequence of foreign language courses, based on whether they enroll in the program in grade 7 or 9, and a world view social studies sequence that includes American History in a Global Context, World Geography, International Careers, International Governments, World History, International Affairs, International Relations, and International Studies. The ISC program offers courses designed to assist students in developing entry-level skills that may lead to careers in international accounting or banking, international office technologies and management, international foods, or international family studies.

Classroom work is enhanced by internships in the St. Paul business community. Internships are currently being developed with representatives from the World Trade Center in St. Paul. Although these internships are available, few students elect to participate in the internship program.

In addition to the ISC program, Humboldt is involved in a number of partnerships with local, regional, and national universities and colleges, a large local business, and other programs run by the St. Paul Public Schools. In addition, Humboldt is an active member of the St. Paul Tech Prep Consortium. Each of these partnerships enhances the school-based learning that occurs by providing linkages to work-based learning in the community. Some of the more salient partnerships are outlined below.

Humboldt has developed formal partnerships with the University of St. Thomas, the University of Minnesota Institute of International Studies, the University of Minnesota College in the Schools program, St. Olaf College, and the University of Wisconsin–River

Falls. Each of these partnerships is designed to provide faculty and student teachers working and enrolled at the various postsecondary institutions with the opportunity to use Humboldt classrooms as practicum sites and applied research labs. In return, the university partners provide technical assistance, sit on various committees, and disseminate current information to students and staff.

Humboldt is the home of a number of pilot partnership programs operated by the St. Paul Public Schools, including the Enrichment Program, Pangea Magnet, Montessori Magnet, Minority Encouragement Program, and Hispanic Employment Program. Each of these programs has a different focus; however, they all strive to better the school and postschool lives of students enrolled at Humboldt. In addition, a number of these partnership programs are designed to assist students in making connections to postschool options and facilitate the transition made by students from school to adult life.

Faculty are also involved in a comprehensive business education partnership with Ecolab, Inc., whose world headquarters is located in downtown St. Paul. According to a document from Ecolab, the partnership with Humboldt was "Initiated in 1986 in response to community concerns about American education." The partnership is designed to share resources and encourage dialogue between education and business professionals and enhance career development opportunities to better prepare students for the transition into the working world.

The Ecolab partnership meshes well with the ISC program. According to their materials, Ecolab "is a leading developer of premium cleaning, sanitizing, and maintenance products and services for hospitality, institutional, and industrial markets. Customers include hotels and restaurants, food service and healthcare facilities, dairy plants and farms, and food and beverage processors around the world." Ecolab, based in St. Paul, operates in 26 countries and employs more than 7,400 people worldwide.

In addition to working with local universities and colleges to provide training opportunities for future educators, Humboldt is a member of the St. Paul Tech Prep Consortium, which includes the other St. Paul Public High Schools, Inver Hills Community College, St. Paul Technical College, Metro State University, the University of Minnesota, the St. Paul Chamber of Commerce, and Dunwoody Institute. The St. Paul Tech Prep Consortium has developed a number of articulated programs that begin at the

secondary level and continue at the postsecondary level. Students who enroll in Tech Prep programs while in high school may receive either advanced credit or advanced placement at the postsecondary level and would not be asked to unnecessarily repeat coursework they completed in high school at the postsecondary level. Unfortunately, the Tech Prep program is still in initial stages of development and less than 25 students at Humboldt elected to enroll in the program during the 1995-1996 academic year.

The major restructuring activities occurring appear to focus on the ISC and Tech Prep programs. The remainder of this discussion will focus on those two programs. In addition, a number of restructuring facilitators and barriers that emerged during the site visit will also be posited.

Two Restructuring Foci

At first glance, Humboldt is a very traditional comprehensive high school. The students attend classes throughout a traditional seven-period day, and the building appears to function in an orderly manner. However, two initiatives are emerging that appear to have the momentum to restructure the education that students at Humboldt receive. Those two programs include the ISC program and the Tech Prep program. Each of these programs will be discussed below.

International Studies and Careers

As previously mentioned, the ISC program is a magnet-like designation given by the St. Paul Public Schools. Each of the six comprehensive high schools administered by the St. Paul Public Schools has a special designation or pseudo-magnet program. The ISC program is a magnet in the sense that it is only available at Humboldt and is designed to draw students from throughout St. Paul to the program. The ISC program was initially designed to provide students comprehensive instruction in both languages and social studies, focusing on world related issues and was identified as a magnet by the St. Paul Public Schools when those designations were initiated in 1991.

During the 1984-1985 and 1985-1986 school years, a group of teachers at Humboldt met on a regular basis to discuss connections that could be made between the language programs and the social studies programs. These meetings actually lead to the development of the ISC program. However, it was not until the district designated the ISC

program as an official specialty program that the program was implemented. The St. Paul Public Schools designated the ISC program as a specialty program prior to the beginning of the school year in the fall of 1987.

Students wishing to enter the ISC program could do so only in either the 7th or 9th grade in order to be able to enroll in a four- or six-year program. During the 1995-1996 school year, approximately 90 of the school's 1,300 students were officially enrolled in the ISC program. The remaining spots in the ISC designated courses were filled by students who elected to take those courses but who were not enrolled in the program.

To date, no follow-up data has been collected on the outcomes attained by students enrolled in the ISC program. However, discussions with teachers suggest that students enrolled in the ISC program are more likely to attend postsecondary education after graduation; are less likely to transfer to another school during the academic year or during their middle school and high school careers; and "appear to select careers that relate to international studies in some form or fashion." Formal follow-up of former ISC enrollees may reveal more specific information about the educational and career paths they have elected; however, there is no follow-up activity currently planned.

Unfortunately, after the 1995-1996 school year, the St. Paul Public Schools were considering not recognizing the ISC program as a "specialty" program. In an attempt to reorganize the provision of school-to-work curricula throughout St. Paul, the school district is now in the process of examining the impact of the specialty programs on the outcomes attained by former graduates. The results of this examination were not known at the time of the writing of this report.

Tech Prep

The second major restructuring initiative getting underway at Humboldt is based on joint efforts of the Humboldt staff and the St. Paul Tech Prep Consortium. Beginning in the 1993-1994 academic year, the Tech Prep program is designed to explicitly show students connections between school-based learning and postschool life. The Tech Prep initiative focuses on education for employment, incorporating applied learning by blending school-based and work-based activities in a coherent program beginning at the high school level and extending through the postsecondary level.

The St. Paul Tech Prep consortium consists of representatives from all the St. Paul public high schools, Inver Hills Community College, St. Paul Technical College, Dunwoody Institute, Metro State University, and the University of Minnesota. Each of these organizations and member institutions have developed Tech Prep programs in the following broad vocational areas: business, home economics, industrial education, and performing arts. Over 30 specific careers in all have been identified within these broad areas of study.

According to a brochure from the St. Paul Tech Prep Consortium, the Tech Prep program of study is designed to provide students with

- a combined secondary and postsecondary program leading to an associate degree or a two-year certificate.
- academic and vocational/technical education courses in a well-defined sequence of studies designed to prepare students for the world of work and/or higher education.
- infusion of occupational application into academic courses.
- increasing the academic rigor of vocational/technical courses.

The Tech Prep program at Humboldt focuses on the broad areas of business education, home economics, and industrial education. The Tech Prep Implementation Team, a group of vocational and regular education teachers at Humboldt, have met regularly since 1992 to design a Tech Prep program that would mesh with the other curricular offerings that exist. In addition to meeting during the academic year, members of the team have been involved with the NCRVE Urban Schools Network since 1992 and have attended annual meetings in Berkeley, California, centered around the implementation of Tech Prep programs and integrating academic and vocational curricula. The efforts of these teachers should become apparent within the next one to two academic years.

In addition to meeting members of the faculty, teachers from Humboldt have also met regularly as members of committees that include staff from the other consortium partners, including postsecondary education. These committees have worked on developing articulated course offering at the secondary and postsecondary levels. Although the Tech Prep program is not clearly solidified at this point, the relationships that are

developing both within and outside of the school should benefit students in the coming school years.

Restructuring Facilitators

Although the restructuring efforts at Humboldt are still in the development stage, there appears to be two primary restructuring facilitators: (1) the partnerships that have been developed with local and regional universities and colleges and Ecolab and (2) the development of the Tech Prep implementation team. Each of these two facilitators are discussed below.

Humboldt has developed exciting partnerships with local colleges and universities and Ecolab, Inc., a strong international business. The partnerships with the local postsecondary institutions have provided the opportunity to interact with individuals interested in teacher education and secondary-level curriculum development and implementation. These efforts have assisted the staff with the development of Tech Prep initiatives. In addition, staff from Humboldt participated in a statewide study by the University of Minnesota on the efficacy of Tech Prep programs across the state.

The Tech Prep Implementation Team that exists at Humboldt is also a potential restructuring facilitator. The expressed desire of the team members to implement broad-based restructuring efforts was very positive and palpable. That energy and willingness to examine the dynamic nature of school change may spread to the entire staff if the team is able to successfully implement a clearly defined comprehensive Tech Prep initiative. Every effort should be made to bring as many staff members as possible into this process.

In order to garner more support for the restructuring initiatives, the administration should provide the entire staff opportunity to develop a vision and mission and reach consensus on the goals. This training could take many forms and be provided by members of the staff or individuals from outside the building. Faculty members at the University of Minnesota could be contacted to conduct this type of training program.

Restructuring Barriers

Four barriers that appear to be impeding the implementation of restructuring initiatives were identified by the staff at Humboldt: (1) high student mobility, (2) lack of inservice training, (3) lack of common planning time, and (4) scheduling.

Student mobility is a problem throughout the secondary schools in St. Paul. Since 1990, 30% of students enrolled at Humboldt at the beginning of an academic year finish the year at another school in St. Paul. This high level of student mobility erodes program continuity and stability. The level of student mobility should decrease during the 1996-1997 academic year when less permissive district-level transfer policies are implemented.

During the 1995-1996 academic year, the St. Paul Public Schools had one day of inservice for teachers and this was a district-level program. All of the staff that we interviewed were concerned about the lack of teacher-directed inservice and suggested that building-level administrators advocate for building-level inservice in the future. Many teachers said that they would volunteer for a building inservice committee if given the opportunity.

The lack of common planning time for teachers working on Tech Prep and integration activities was also identified as a barrier. According to a number of faculty interviewed, without common planning time within the parameters of the school day, it is difficult for the teaching staff to work cooperatively on lessons and other joint activities. Again, it may be possible for a committee, made up of staff, to address scheduling cooperative planning periods within the school day. The committee could take the lead in implementing these activities; but obviously, the entire faculty would have to agree.

The final barrier to restructuring identified by the Humboldt faculty was lack of input related to district-level scheduling. Many of the teachers interviewed felt that building-level scheduling could potentially eliminate some of the problems experienced by students and teachers enrolled or teaching multi-period or team-taught classes. Building-level scheduling may be one way to address alternative scheduling needs that do not necessarily mesh with the district scheduling system.

Mayfield High School
Las Cruces, New Mexico

Mayfield High School is a four-year comprehensive high school located in the northwest quadrant of Las Cruces, New Mexico. Mayfield is a traditional-looking, two-story high school that sits on a large plot of land surrounded by a number of outbuildings and athletic fields. The main structure houses most of the vocational and all of the academic course offerings, and the outbuildings house traditional automotive, industrial, and building trades education courses.

During the 1995-1996 academic year, approximately 1750 students attended Mayfield. The majority of those students, 60%, are Hispanic, and Spanish is heard mingled with English in the halls and classrooms at Mayfield. The vast majority of the students attending Mayfield are native Spanish speakers, and the Mexican culture dominates not only Mayfield but Las Cruces as well. The remainder of the student population consists primarily of individuals from northern European decent (35%), with a small number of Native Americans (4%) and African Americans (1%).

During the 1994-1995 school year, 29% of the Mayfield faculty were Hispanic and the remainder were of northern European decent. A number of the faculty that were interviewed expressed concern over the demographic differences between the student population, which is primarily Hispanic, and the faculty, which is primarily Caucasian. A district-level official informed us that the Las Cruces Public Schools are making a "concerted effort to attract and recruit Hispanic teachers."

Las Cruces, a town of about 70,000 people, is located approximately 50 miles north of El Paso, Texas. The geography surrounding Las Cruces is mountainous and the climate is arid. Desert topography dominates the expansive horizon in all directions.

Las Cruces is the home of New Mexico State University (NMSU), which houses a large teacher education program. According to a Mayfield staff member interviewed, a number of the faculty at Mayfield, along with faculty from the other secondary schools in Las Cruces, have worked with student teachers from NMSU, are currently enrolled or have completed graduate degrees at NMSU, or have taught extension education courses at NMSU. In addition, faculty from NMSU have conducted research projects and provided

inservice training at Mayfield and the other schools in Las Cruces. It appears that this relationship is mutually beneficial to both the Las Cruces Public Schools and NMSU.

Mayfield is one of four public secondary schools operated by the Las Cruces Public Schools. Two of the remaining three schools are also comprehensive high schools that house both academic and vocational course offerings. The fourth school is an alternative high school that was designed to serve students that are not reinforced in the traditional academically oriented secondary school environment.

In addition to attending one of the four public secondary schools, the Las Cruces Public Schools and the Dona Ana Branch Community College (DABCC), also located in Las Cruces, have an articulated option where students can be enrolled concurrently in both high school and the community college in a program entitled the Area Vocational School (AVS). According to a brochure produced jointly by the Las Cruces Public Schools and DABCC, "students can take some of their junior and senior year electives at DABCC. Students concurrently enrolled receive credit towards their high school diploma and a college certificate or degree." Over 20 associate degree or postsecondary-level certificate programs are included in the AVS program.

Another benefit of the AVS program is financial. Students can earn up to 36 college credits in the AVS program while still in high school, and program enrollment includes free tuition and books at DABCC. According to the brochure mentioned previously, this can save students over $500 per semester and $2,000 over a two-year period. Obviously, this is a tremendous opportunity to expedite postsecondary education for students who have solidified their career aspirations while in high school.

The AVS program is one effort stemming from the cooperative work of the Dona Ana Tech Prep Consortium (DATPC). The DATPC is an educational consortium that includes faculty from DABCC; faculty from the three comprehensive high schools in the Las Cruces Public Schools and two rural school districts, also located in Dona Ana County Hatch Valley Municipal Schools; and faculty from Gadsden Independent School District. The DATPC was initiated in 1992 by a group of interested educators from the community college and local school districts in an attempt to more fully address components included in the Carl D. Perkins Vocational and Applied Technology Education Act of 1990. In addition to developing the AVS program, the DATPC has also developed formal

articulation agreements between consortium members and has worked on developing career cluster and applied academic programs in the high schools.

The articulation agreements developed by the DATPC are discipline specific and have been developed by teams of faculty from the DABCC and the cooperating high schools. Each of the cooperating high schools have developed specific articulation agreements with the DABCC based on their vocational offerings. For example, Mayfield has developed articulation agreements with DABCC in the following areas: fashion merchandising, secretarial administration, occupational business, retail marketing, computer-aided drafting, architectural technology, and automotive technology. The articulation agreements are the basis of the AVS program that allows students to be concurrently enrolled at the secondary and postsecondary levels.

According to a brochure describing the DATPC, career clusters are educational plans that begin during the first year in high school and can lead directly to work after high school or can form the foundation for additional education. There are four career clusters that exist in the DATPC catchment area: (1) arts/humanities, (2) business/information/ management, (3) health/human services, and (4) industrial/engineering/technical. One of the long-term goals of the DATPC is to have all students focused on taking courses within a career cluster in order to begin thinking about career pathways early in their high school careers. At Mayfield, considerable effort has been undertaken in the business/information/ management area. These efforts will be described in detail later in this discussion.

A final effort of the DATPC has been the introduction and acceptance of applied academics courses in the participating secondary schools and recognition of those courses at the postsecondary level. Applied academics courses are commercially available curricula that teach academic principles in an applied setting. Currently, the DABCC and NMSU entrance requirements can be met based on the successful completion of a limited number of applied academics courses, including Principles of Technology 1 and 2, Technical Math 1 and 2, and Applied Biology and Chemistry.

Again all of the efforts of the DATPC fall under the rubric of traditional Tech Prep curricula (i.e., providing articulated 2 + 2 programs that begin at the secondary level and continue on in a seamless manner at the postsecondary level). During our visits to Las Cruces, we were impressed by the sincerity and diligence undertaken by the members of

the DATPC that we met and interviewed. A genuine feeling of concern for all students became apparent during our visits.

Restructuring efforts at Mayfield have been influenced by both external and internal forces and events. Outside of the walls that comprise Mayfield, the DATPC and the Las Cruces Public Schools have been a catalyst driving some of the changes that have taken place or are scheduled to occur at Mayfield. Inside Mayfield, a number of individuals have worked to restructure life at Mayfield to better meet the needs of students while they are enrolled at Mayfield and once they exit high school and enter the adult world. Each of these forces, external and internal, will be discussed below. However, before that discussion begins, a brief chronology of the restructuring efforts that have occurred in the Las Cruces Public Schools in conjunction with the DATPC will be provided.

Restructuring Chronology

During the 1991-1992 academic year, the Las Cruces Public Schools received a development grant through New Mexico State Carl D. Perkins Vocational and Applied Technology Act of 1990 funds to begin developing Tech Prep programs in the district. This grant provided funding to allow the district to hire a career development coordinator and also hire an individual to work part-time at the DABCC to foster and facilitate the implementation of initial Tech Prep efforts. From the beginning, it was determined by the small group of people that met informally—later, the initial core of the DATPC—that Tech Prep in Las Cruces had to include both traditional vocational and academic course options and that the ending point of the Tech Prep program would not be a vocational certificate or associate degree, but a baccalaureate degree or beyond.

During the 1991-1992 and 1992-1993 academic years, the DATPC was solidified and began working on a number of the initiatives previously outlined, including laying the groundwork for purchasing the applied academics materials, developing the AVS program, initiating career clusters, and writing articulated curriculum that was met with approval by both the secondary- and postsecondary-level instructors. A number of individuals from the DABCC and local high schools spent considerable amounts of time researching various options and then discussing plans, not only with members of the committee but also with faculty from their specific buildings. Feedback from the individual buildings would then be

relayed back to the committee in order to provide formative feedback regarding proposed plans prior to implementation.

During the summer of 1993, members of the DATPC applied and were accepted to attend the NCRVE summer institute as a Tech Prep team. At the institute, members of the DATPC team worked on finalizing articulation agreements that were the basis of implementing the initiatives previously mentioned. The AVS program, career clusters, and applied academics initiatives were all successfully implemented at the beginning of the 1993-1994 academic year, based in part on work that was completed by the team that attended the NCRVE summer institute.

Concurrently, during the 1993-1994 academic year, the Las Cruces Public Schools embarked on two divergent restructuring initiatives. The first was designed to move the secondary schools in the district from traditional seven-period school days to four-period block scheduling. The second district-level initiative centered on school-to-work activities designed to connect school-based and work-based learning activities.

Each of the secondary schools in Las Cruces were allowed the flexibility to develop their own block scheduling formats and their own schedules for implementation. The faculty at Mayfield elected a four × four semester-based schedule that was implemented during the 1995-1996 school year. This allowed the faculty at Mayfield some time, although not an excessive amount, to prepare to successfully move from a traditional to a nontraditional scheduling system.

The second district-level initiative implemented during the 1993-1994 academic year focused on developing school-to-work related activities, including implementing school-based learning, work-based learning, and connecting activities. During this academic year, a team of educators from the Las Cruces Public Schools met and developed the idea of implementing academies at each of the high schools in order to meet the school-to-work initiative that had become a district-level priority. At Mayfield, the business education faculty developed a business academy that would operate as a school within a school, with a small group of students (approximately 50 per year) interested in pursuing business-related careers.

In order to facilitate the development and implementation of the academy, the Las Cruces Public Schools submitted a successful grant to the New Mexico State Department of Education in order to obtain "relearning funds" for teachers. These funds were used to send teachers to conferences and allow them to attend meetings specifically related to the development of academy models. Ironically, a number of the teachers interviewed expressed concern that implementation of block scheduling during the 1995-1996 academic year hurt the development of the business academy at Mayfield because of scheduling difficulties. The four-period day reduced the number of student options and made it difficult to schedule academy students into a two-period block. However, ten teachers were prepared to teach as members of the academy during the 1996-1997 academic year.

Restructuring at Mayfield

Based on the observations, interviews, and records reviewed, we believe that restructuring efforts at Mayfield have focused on three broad areas: (1) DATPC initiatives, (2) development and implementation of the Business Academy, and (3) implementation of the block schedule. Although the development and implementation of most of the DATPC activities and block scheduling were not the sole efforts of individuals at Mayfield, they have had tremendous impact on the faculty, staff, and students attending Mayfield. The block schedule, initiated as a district-level decision, has also influenced life at Mayfield. Each of these restructuring efforts will be discussed individually below.

DATPC Initiatives

Restructuring efforts, stemming from the work of the DATPC, include the development of articulation agreements, the AVS program, traditional 2 + 2 Tech Prep options, career clusters, and applied academics, which have all been previously discussed. These restructuring actions, initiated through seed money from federal vocational education legislation, have impacted all of the high schools in Dona Ana County. Below is a discussion of how these actions specifically impact Mayfield High School.

The DABCC has developed specific articulation agreements with Mayfield in the areas of fashion merchandising, secretarial administration, occupational business, retail marketing, computer-aided drafting, architectural technology, and automotive technology. Based on these specific articulation agreements, developed cooperatively by faculty from DABCC and Mayfield, students can enroll in the AVS program and receive concurrent high

school and community college credit, or students can use credits earned in these areas in the traditional 2 + 2 Tech Prep mode. For example, a student may elect to enroll in the AVS automotive technology program as a junior or senior in high school and complete both high school and community college credit for completing articulated courses; or a student may elect to enroll in the automotive program after exiting Mayfield and apply specific automotive courses taken in high school to his or her associate degree at DABCC. According to interview data, approximately 30 students at Mayfield participated in the AVS program during the 1995-1996 academic year.

The career clusters is a method designed to have all secondary students in the DATPC catchment area begin thinking about potential career paths early in their high school careers. The DATPC recognized four career clusters: (1) arts/humanities, (2) business/ information/management, (3) health/human services, and (4) industrial/engineering/ technical. The goal of career clusters is to have all students elect a cluster in the ninth grade and begin taking courses that relate to the cluster. Selecting a career cluster is designed to be flexible, a student can change his or her selected cluster at any time, and is also designed to not limit students in any way. For example, if a student has elected to be in the arts/humanities cluster during the first two years of high school and then switches into the health/human services cluster, that individual would not lose credits or jeopardize his or her chance to graduate on time. Again, the career clusters are a tool designed to facilitate early student career planning.

At Mayfield, the concept of career clusters has not taken tremendous hold with students, although every student in the building has selected a cluster. A number of students interviewed could not remember what career cluster they had selected and did not feel that their selection made much difference when selecting courses for the next academic year. Additionally, some of the teachers interviewed stated that the career clusters component of the Tech Prep initiative needs to be brought to the forefront of the course taking and selection process.

Business Academy

The business academy at Mayfield originated with a Carl D. Perkins Vocational and Applied Technology Act of 1990 planning grant during the 1993-1994 school year. During the 1993-1994 school year, a team of business educators at Mayfield met to discuss the

possibility of creating a business academy. The business academy would operate like a school within a school and individuals would take all of their courses, both academic and vocational, with the same cohort of students.

During the 1993-1994 school year, it was also determined that students enrolled in the business academy would receive a true school-to-work experience, including work based experiences of 15 hours per week, and would be responsible for providing 20 hours of community service per year. Every attempt would be made to find paid work-based learning experiences for the students enrolled in the academy. The goal was to enroll 50 sophomores into the program per year and work with a group of between 8 to 12 teachers per year depending on class sizes and scheduling.

The result of the planning that occurred during 1993-1994 lead to the receipt of a Carl D. Perkins Vocational and Applied Technology Act of 1990 implementation grant during the 1994-1995 school year. During 1994-1995, eight teachers worked with the 45 sophomores who enrolled in the academy. Throughout the 1994-1995 school year, initial bugs and gremlins were worked out of the system and the majority of the original cohort elected to stay in the academy at the end of that school year.

At the beginning of the 1995-1996 academic year the block schedule (discussed below) was implemented at Mayfield and caused some difficulty with the nontraditional scheduling needs of the students enrolled in the academy. However, 45 sophomores entered the program in the 1995-1996 school year and 40 of the initial 45 sophomores remained in the program and successfully completed their junior year in high school. During the next academic year, the program enrolled 50 new sophomores, 45 juniors, and 40 seniors, working with 10 teachers. However, the academy program is still evolving to meet the needs of students within the constraints of Las Cruces Public School policies.

Block Scheduling

According to a booklet published by Mayfield entitled *Restructuring at Mayfield High School (1995-1996)*, the main restructuring activity has been the development and implementation of block scheduling. The booklet highlights the decision process utilized to implement the block schedule, projected benefits for teachers and students, and other policies that are affected by the move towards block scheduling. Although block scheduling

is highlighted, it appears to mesh with and enhance some of the other restructuring initiatives occurring throughout Dona Ana County.

The block scheduling action was initiated during the 1993-1994 academic year and was, according to interview participants, a district-level decision. During the 1993-1994 and the 1994-1995 school years, Mayfield and the other two comprehensive high schools in Las Cruces developed their own block scheduling format. Mayfield implemented a semester block schedule at the beginning of the 1995-1996 academic year and is in the process of evaluating the outcomes attained and of assessing the next steps to be taken to ensure that block scheduling increases the outcomes attained by students.

Restructuring Facilitators

The two obvious restructuring facilitators that emerged during analysis of data collected during our visits to Mayfield both relate to teamwork. The first is the teamwork that exists in the greater Las Cruces area including the DATPC and various school district committees. The second is the teamwork exhibited by the staff at Mayfield, for example, the team of teachers that work in the business academy. The teams that exist both outside and inside of Mayfield will be discussed.

After analysis of the data collected during our visits to Las Cruces, it became obvious that all of the individuals that we encountered were interested in the well being of youth and young adults and in how educational systems can change to better meet their needs as students and future adults. The DATPC is a prime example of the teamwork that exists in the greater Las Cruces area. The DATPC consists of representatives from the local community college as well as district-level administrators, building-level administrators, and teachers from all of the area high schools. These representatives have implemented a number of successful initiatives since 1991 and continue to work to assess their progress and the outcomes of students.

Within Mayfield, the business academy team is an example of a group of individuals committed to improving the lives of students. The business academy team has developed a solid program in a few short years. In order for the team to progress, the same degree of effort that went into the initial development and implementation of the business

academy should be utilized to formatively assess where the program is and where it will head in the future.

Restructuring Barriers

Two restructuring barriers emerged based on analysis of data collected at Mayfield: (1) lack of involvement from groups outside of the educational arena and (2) coordinating various restructuring efforts into a unified effort. Each of these barriers will be discussed individually.

Although there are a number of teams working in the greater Las Cruces area to advance the education received by youths and young adults, membership on those committees consists exclusively of educational personnel. It may be beneficial to involve receptive civic and business leaders as members of restructuring-related committees and teams in order to garner public support for educational projects. For example, members of the business community in Las Cruces may be interested in serving on a team or advisory committee for the business academy that exists at Mayfield. These professionals, working in the field, could then serve as an important link with employers when developing jobs for future academy students.

Finally, based on an analysis of the various restructuring activities that are either being developed or implemented in Las Cruces, it appears that a number of the teachers interviewed felt that, instead of complimenting each other, they were in competition. For example, a few of the teachers felt that implementing the block schedule decreased the likelihood of success for the business academy program because so many students who wanted to enroll in the academy had scheduling conflicts. It may be wise to develop a steering committee within Mayfield to work on the integration of various restructuring efforts.

West Charlotte High School
Charlotte, North Carolina

West Charlotte High School (West Charlotte) is a unique high school facility. The West Charlotte campus includes 14 buildings arranged over 150 acres and a large football stadium, all set on beautiful well-maintained grounds. West Charlotte serves over 1,700 students enrolled in grades 10 through 12 and reminds most visitors of a small liberal arts college campus rather than a large urban high school.

West Charlotte is one of the most well-maintained high schools we have ever visited. During the visits conducted during the fall of 1995 and the spring of 1996, both of our teams commented on the lack of graffiti and litter found on campus. According to the 1995-1996 student handbook,

> West Charlotte prides itself in beautifying the school property. Many efforts have been made to ensure the school campus is a pleasant place to live and learn. It is an expectation that maintaining its beauty and cleanliness will be accomplished. All students should contribute to this effort. (p. 11)

West Charlotte is one of 14 public high schools operated by the Charlotte-Mecklenburg Public Schools, which encompasses both the city of Charlotte and the larger Mecklenburg County. Twelve of those schools, including West Charlotte, are comprehensive in nature, offering both traditional academic and vocational courses to students. The other two high schools are alternative schools. The first alternative school serves teen mothers, and the second is competency-based and serves primarily older students who exited the school system and have elected to return to finish their high school diploma.

West Charlotte High School is located in a working class neighborhood in northeast Charlotte. The current West Charlotte High School site was built in the 1950s and serves as the center piece of the local neighborhood, according to one of the faculty members interviewed. However, West Charlotte serves students from throughout Charlotte, not just those individuals that live in close proximity to the school.

During the 1995-1996 academic year, over 1,700 students attended West Charlotte High School, a facility built to accommodate 1,200 students. The majority of those students are African American (60%), Caucasian (25%), Asian American (10%), Hispanic

(5%), and Native American (<1%). The plurality of the student population at West Charlotte is very evident. Students from over 63 countries attended West Charlotte during the 1994-1995 school year and a flag for each of those countries hangs from the ceiling in the student commons. The students at West Charlotte are served by over 100 faculty members and many more staff persons.

The students at West Charlotte express an incredible amount of pride in their school. The school handbook, faculty and staff interviewed, students that acted as our escorts, and others we met in the hallways were very cheerful and, for lack of a better word, exhibited pride in being a West Charlotte Lion. For example, a number of teachers interviewed stated that approximately 90% of the West Charlotte family attends home football games. In addition, West Charlotte alumni clubs exist across the United States; and in the summer of 1994, over 200 alumni from West Charlotte had a reunion in Irvine, California.

In addition to providing vocational and academic course offerings, West Charlotte also houses two district-wide specialty programs. First, West Charlotte houses the Charlotte-Mecklenburg secondary-level English as a Second Language (ESL) program. Approximately 100 students are enrolled in ESL programs at West Charlotte, and they are served by ten faculty members.

West Charlotte also houses an open school program. The open school program functions as a school within a school and provides students instruction in a nontraditional format. Students enroll in the open school program in elementary school and have the option to continue with the program throughout their public school careers. The students who enroll in the open program at West Charlotte move to the high school from Piedmont Open Middle School. However, students can apply to enter the open program at the beginning of each school year if there are any open spots that need to be filled.

As previously mentioned, West Charlotte offers students a wide array of traditional academic and vocational course options. The school is structured into traditional departments including English, math, science, social studies, foreign language, physical education, fine arts, ESL, exceptional education (special education), vocational business-marketing, and vocational technical education. Interestingly, the vocational education courses are divided into two programs at West Charlotte: vocational business-marketing

and vocational technical education. During the 1995-1996 academic year, six faculty members taught in the vocational business-marketing program and eleven faculty members taught in the vocational technical education program.

According to one of the faculty members interviewed, over 1,100 students enroll in vocational education programs per year at West Charlotte. Students have the option of pursuing coursework in the following areas: marketing, business, health occupations, consumer home economics, occupational home economics, trade and industrial education, and technology education. Most of these courses are starting points of formal Tech Prep programs offered in conjunction between the Charlotte-Mecklenburg Public Schools and Central Piedmont Community College (CPCC).

Three areas where West Charlotte has initiated restructuring efforts include the Tech Prep program, integration of vocational and academic courses, and the implementation of a career planning portfolio that is completed by all high school students across the district. The Tech Prep program that exists in the Charlotte-Mecklenburg Public Schools was a district-wide effort between teams of secondary-level teachers from specific disciplines from the various high schools in the Charlotte area and instructors from specific disciplines at CPCC. The goal of the Tech Prep program is to allow students to begin a program at the secondary level and finish it at the postsecondary level without having to repeat coursework or enroll in courses that duplicate instruction. This articulated program has existed since 1991 and includes not only vocational programs but also academic course offerings in the disciplines of English, fine arts, human services, and social studies. According to one of the teachers interviewed at West Charlotte, very few students participate in this program and desire to take all of their courses on the West Charlotte campus.

The second major restructuring effort occurring at West Charlotte is the integration of vocational and academic courses. Since the summer of 1992, a team of teachers at West Charlotte has been working with the NCRVE Urban Schools Network to develop and implement integrated courses at West Charlotte. This team participated in summer institutes operated by NCRVE in Berkeley, California, during the summers of 1992, 1993, 1994, and 1995 to plan integrated course offerings.

Following the 1992 NCRVE summer institute, the members of the West Charlotte Integration team identified the following integration-related goals: explore the use of the

senior project as a bridge between academic and vocational course offerings, determine how to promote interdisciplinary teaming of faculty, develop an evaluation plan to assess their initial activities, conduct staff meetings to raise awareness of integration activities, explore the use of CORD materials, identify and develop methods to share equipment and laboratory materials, and expand the existing peer tutoring program. These goals have been consistent since the development of the integration team. Other goals that the team has addressed since 1992 include creating a variety of ways to publicize the integration and NCRVE Urban Schools Network at West Charlotte; seeking funding to hold a workshop for the West Charlotte integration team; identifying a method to develop joint planning time to create integrated lessons, units, and other activities; and emphasizing the cultural diversity of the West Charlotte student body.

To date, the faculty and staff at West Charlotte are still working to implement these goals. The integration team is still meeting and attempting to develop integrated courses and materials at West Charlotte. Unfortunately, a number of circumstances related to the administrative leadership at West has impeded the progress of implementing many of the identified goals.

At the conclusion of the 1994 academic year, a long-time principal at West Charlotte retired. Since then (the 1995-1996 academic year), West Charlotte has had two principals. The first principal was the chief administrator at West Charlotte until February of 1996 and left the building at that point in time. For the remainder of the 1995-1996 academic year, an interim principal was named. This lack of leadership stifled most of the efforts of the integration team, and it is difficult at this time to determine the status of prior integration-related efforts.

The third major restructuring related activity occurring at West Charlotte is the completion of a career planning portfolio for all students enrolled in the Charlotte-Mecklenburg schools in grades 8 through 12. According to a statement on the cover of the career planning portfolio, "The purpose of the portfolio is to help you (the student) collect information about yourself that you can use for making personal, educational, and career decisions that affect your entire life." The cover of the portfolio asks for demographic information, has a chart designed to collect and display academic progress, and has a section that addresses plans after graduation. The remainder of the portfolio is broken into five sections for each grade between 8 and 12 and asks for the same information for each

grade, including present career interest, personalized educational plan, inserts, student conference date, comments, and space for the counselor's and student's signatures.

The personalized educational plan is an IEP-like document that tracks a student's coursetaking from grades 9 through 12. The cover of the plan asks students to check whether they are pursuing college prep or Tech Prep options; then, at each grade, the students take math, English, science, social studies, personal health issues, and electives. The entire portfolio is an excellent individualized way to plan and monitor a student's high school coursetaking. This plan is an excellent start for restructuring education to focus more on the postschool goals and outcomes attained by students.

Restructuring Facilitators

Although most of the restructuring efforts at West Charlotte are still not solidified, there are two major facilitators that could act as springboards for further restructuring activities. Those two activities are the integration team and the career planning portfolio. Each of these facilitators will be discussed individually below.

The integration team has been in existence since 1992 and has attended four summer institutes sponsored by NCRVE. The team has developed plans in the past but appears to have experienced barriers to implementation. It is our recommendation that the team continue to meet and work on accomplishing short-term goals related to educational restructuring. The team provides a solid foundation upon which other activities can be built.

The career planning portfolio developed for all secondary students in the Charlotte-Mecklenburg School District appears to be an excellent format to enhance the connections between school-based and work-based learning activities. Many school districts across the United States are attempting to develop similar documents to use with all students as they plan their high school careers and postschool lives. We believe this planning document is an excellent tool and gateway that could be used to solidify additional restructuring activities.

Restructuring Barriers

The primary restructuring barrier at West Charlotte High School is the lack of consistent leadership. One of the tenets of educational restructuring is administrative support. Having three principals over the past two academic years has not provided West Charlotte with the consistent leadership to implement educational restructuring. We recommend that, at the beginning of the 1996-1997 academic year, the integration team work on involving the principal and other gatekeepers in the school in all restructuring efforts. Without this support, it will be difficult to successfully implement even the most complete plans.

CROSS-SITE ANALYSIS

For the next phase of this study, a cross-site analysis of the case study findings was conducted. This section will describe the themes that emerged during data analysis that were consistently identified, either implicitly or explicitly, by the four partner-sites as key elements associated with educational restructuring that involved vocational education and resulted in positive outcomes for diverse student populations. This discussion will extend beyond the case study findings in the first section of this document and will assist the investigators in inducing a practically derived theory and description of existing educational restructuring initiatives. The analytical framework used to organize the cross-site analysis is detailed below.

Development of an Analytical Framework

In order to guide data analysis and reporting, an analytical framework was developed that included the following five components: (1) motives for restructuring, (2) school organization and leadership, (3) students and learning, (4) connecting activities, and (5) evaluation. Each of these components will be discussed briefly below.

Elmore (1990) believes that there are three "motives" pushing school restructuring: (1) economic viability, (2) social equality, and (3) changes within teaching. The motives that each of the four partner-sites explicitly identified or that otherwise emerged will be discussed.

School organization and leadership is the next component in the analytical framework. In all of the literature reviewed, school organization and leadership were included as important elements of successful reform initiatives. This study allowed the participants from the partner-sites to define their own organizational structures in context with their restructuring actions.

Students and learning, the third component of the analytical framework, is used as an advanced organizer to address the curriculum and pedagogy utilized by the sites to increase students' school and postschool outcomes. This component may be the most crucial to the results of the current project. Newmann and Wehlage (1995) have observed that successful educational reform requires more than altering the length of class periods or the type of administrative structure that exists in an educational setting. Reform requires altering how material is presented to students and how understanding that material is assessed.

Connections, the fourth component in the analytical framework, is used to describe the established collaborative relationships both in and out of school that facilitate restructuring efforts. Crossdisciplinary and departmental activities within the school and collaborative relationships with community organizations, colleges, and businesses outside of the traditional academic environment are described. Schools do not function in isolation from the other systems that exist within their communities and throughout society. They need to explicitly foster connections with those other systems in order to be ultimately successful.

The fifth and final component in the analytical framework addresses how each of the sites are evaluating the impact of implementing restructuring efforts. Without evaluative information on the processes and outcomes associated with reform actions, it will be difficult for educational agencies to make formative and summative statements regarding the effectiveness of those efforts. Evaluative information may have tremendous value to others seeking information on the successes and barriers related to specific restructuring initiatives.

Motives for Restructuring

Across the four sites, the two most frequently identified motives for restructuring were economic viability and social equality. According to Elmore (1990), the economic viability motive for educational restructuring stems from the business community in the United States pressuring schools to restructure in order to regain, maintain, and hopefully increase economic viability in the emerging global economy. Elmore summarizes this economically based motive, calling for educational reform by stating,

> In order to sustain our present standard of living and regain our competitive position in the world, it is argued, we will need a better educated workforce, which will, in turn, mean that schools will have to dramatically improve the way they educate all children. (pp. 1-2)

In three of the four sites, economic viability appears to be the primary motive for implementing restructuring activities. According to a number of teachers and administrators at the sites, the primary reason to change the way schools teach students is to ensure that our society has enough skilled people in the workforce that will be able to generate enough money to support our economic system. On a more personal note, many of the educators interviewed expressed concern about their retirement, wondering whether their current students will be able to support the upkeep of society with limited prospects for economically advantageous employment. This theme was very apparent across three of the sites.

At the fourth site, societal equality was viewed as the primary reason to restructure the school. Elmore (1990) relates social equality to unresolved civil rights issues "stated in the language of demography, equity, and social justice" (p. 2). Elmore summarizes the social equality motive for reform as follows:

> The proportion of children living in poverty is increasing, the argument goes, and these children will have to be well-educated if they are to attain economic self-sufficiency and support a growing population of elderly, or our society will face unacceptably high levels of poverty and dependency. (p. 2)

At the site where societal equality emerged as the motive for restructuring, almost all of the faculty interviewed stressed the need to increase the number of individuals from minority populations in professional occupations. Unfortunately, based on the interviews and observations, faculty and staff did not appear to value the role vocational education can

play in potentially increasing the number of individuals from minority groups in high skill high pay occupations. This finding was not observed at the other three sites.

Although Elmore (1990) believes that this motive is couched in the ideal of social equity or equality, there exists an element of economic viability embedded within this more socially oriented motive. In other words, reforming education to become more economically viable is one way that individuals from traditionally low socioeconomic circumstances can more fully share in the economic bounty available within the United States. In addition, society at large, particularly the economic well-being of a society at large, benefits from the revenue generated by newly skilled workers who provide a valuable service to the business community while also advancing their individual economic circumstances.

Very little discussion revolved around the motive identified by Elmore (1990) as changes in teaching. According to Elmore,

> [e]ducation is losing its claim on the labor pool from which teachers have traditionally been drawn—college educated, largely female, often minority, upwardly mobile young people—who now have access to other professional occupations. If teaching is to regain its competitive position in the labor market, it is contended, schools will have to become more attractive places to work and the economic rewards of teaching will have to become competitive with those of other professional occupations. (p. 2)

This motive, in sum, revolves around the belief that, unless the field of education, in general—and schools, specifically—is an attractive arena in which to work, the best potential teachers will select other, more attractive or potentially more lucrative careers. Conversely, those individuals left to educate (i.e., those willing to enter a less attractive and less financially rewarding profession) will, most likely, be less capable of meeting the varied challenges of teaching. These issues were not addressed at any of the four sites involved in this study.

School Organization and Leadership

School organization and leadership is the second component in the analytical framework. In the literature reviewed, school organization and leadership were included as important elements of successful restructuring initiatives. This study allowed individuals

from the sites to define their own organizational structures in context with their restructuring actions.

School organization and leadership were different at each of the four sites. At one site, the implementation of block scheduling was the primary restructuring effort. At this site, block scheduling completely altered the structure of the school day. The idea for block scheduling came from the teaching staff, and the leadership provided a supportive but hands-off environment to facilitate the exploration of block scheduling. This leadership style meshed well with the proactive staff that existed at this site.

At the second site, block scheduling was also implemented, however, this was a district-level administration decision rather than a decision that came from the teaching staff. In addition to block scheduling, this site was also working to develop career clusters and at least one career academy within the school. At this site, the building-level leadership acted as a conduit between the central office and the building-level faculty. District-level administrators were also very involved with the school at this site.

At the third site, the vocational education staff was the primary force driving restructuring efforts. The district Tech Prep consortium provided a team of teachers at this school with information and feedback regarding the restructuring activities they were undertaking. Although this small core group of teachers had not been able to implement broad based restructuring actions, they were working on a number of smaller vocationally relevant restructuring activities, including the development of a formal Tech Prep program with a local community college and a career academy at the school.

The fourth site experienced two changes in building-level administration during the 1995-1996 academic year, which inhibited restructuring efforts. In addition to the lack of administrative constancy, teachers at this site appear to be satisfied with the form and function of their school. According to Hord, Rutherford, Huling-Austin, and Hall (1987), unless individuals are aware of the need for change, it is impossible for change to occur. The faculty and staff at this site appear satisfied with their current organization and have not had consistent leadership during the year.

Students and Learning

Griesemer and Butler (1983) believe that enhanced student learning is the base element related to the development of educational reform efforts. Without the desire to enhance student learning, thus improving the subsequent outcomes attained by students once they exit the secondary school system, there would be no need to reform the educational system that exists in the United States. In addition, Newmann and Wehlage (1995) have observed that educational reform requires more than altering the length of class periods or the type of administrative structure that exists in an educational setting. Reform requires altering how material is presented to students and how understanding that material is assessed.

Enhanced student learning is an explicit goal at each of the four sites. Every faculty person interviewed from each of the four sites stressed that their school's restructuring activities were, in theory, designed to enhance student learning. For example, at one site where block scheduling has successfully been implemented, many faculty members interviewed did not feel that they had received adequate training on how to incorporate new teaching methods into their classrooms. In other words, the school had changed, but individual teachers may not have made dramatic changes in their classroom behaviors.

All four of the sites have focused restructuring efforts at the school organization level rather than the students and learning level. Even in the two sites that have implemented block scheduling, little has been done to alter the form and processes by which students are provided information in the classroom and by which they are assessed. None of the four sites appear to have developed formats for imparting this information to teachers in a meaningful way.

Connections

Schools do not function in isolation from the other systems throughout society and need to explicitly address connections with those other systems in order to be ultimately successful. Connections, the fourth component in the analytical framework, describes the collaborative relationships, both in and out of school, that have been established at each of the sites in an attempt to facilitate restructuring efforts. Cross-disciplinary and cross-departmental activities within the school and collaborative relationships with community

organizations and businesses outside of the traditional academic environment have been observed and are described below.

All four of the sites have developed connections with local community colleges and universities. All four of the sites have developed formal or informal Tech Prep programs with local community colleges. In addition, all four of the sites have developed relationships with four-year colleges and universities to assist students in making the transition from high school to college.

However, only one of the four sites has solidified relationships with business and industry. These relationships are important on two fronts. First, the business partners can assist the schools in developing up-to-date programs and practices. Second, the business partners can function as potential work experience sites for students. Without these relationships, the vocational education programs at the remaining three sites are missing these opportunities.

Evaluation

The fifth and final component in the analytical framework addresses how each of the partner-sites are evaluating the impact of their structuring efforts. Without evaluative information describing the processes and outcomes associated with reform initiatives, it will be difficult for educational agencies to make formative and summative statements regarding the effectiveness of their reform actions. This may have tremendous value to others seeking information on the successes and barriers related to specific reform initiatives.

Unfortunately, none of the four sites have addressed the need to evaluate the impact and outcomes associated with their restructuring efforts. One site had previously been involved in a state-level follow-up study; however, that study did not address building-level restructuring efforts. This oversight needs to be addressed in order to verify the successes or failures of these sites' reform efforts.

CONCLUSIONS

Two primary research questions guided this investigation: (1) How has each site implemented educational restructuring initiatives? and (2) How does vocational education fit into those restructuring efforts? To answer these questions, respondents were required to address, in a chronological format, the processes that each partner-site undertook to successfully implement restructuring initiatives. In addition, four secondary questions were identified in order to collect more specific information about each of the partner-sites. Those questions were (1) What are the core elements and processes of program development and transformation that produce innovative and promising practices for diverse populations of students? (2) What are the organizational mechanisms, policies, and practices that result in valuable education and employment outcomes for diverse populations of students? (3) What relationships exist among school resources, activities, stakeholders, and expected student outcomes? and (4) What works in effective comprehensive urban schools that have included vocational education in systemic restructuring efforts to successfully serve diverse populations of students? In other words, what was done (the interventions applied), to whom (urban high schools serving diverse populations of students with varying and multiple needs), and with what effects (the educational and employment outcomes attained by those students)?

In regard to the first research question—how has each site implemented educational restructuring initiatives—a number of initial conclusions can be drawn from the case studies of the four partner-sites. The most salient conclusions, briefly discussed below, are that (1) successful restructuring takes time, (2) successful restructuring takes teamwork, (3) successful restructuring occurs from both internal and external pressure and motives, and (4) successful restructuring is an ongoing process.

Time

Successful restructuring efforts appear to take time to develop, implement, and evaluate. On average, it takes teams of teachers at each of the partner-sites approximately three years to plan and develop restructuring activities before they are initiated on a wide scale. In addition, once these efforts and activities are initiated, it takes more time to address and grapple with unforeseen barriers that arise post-implementation. Without

adequate time built into the school day, it does not appear that teachers will be able to successfully manage or participate in the development and implementation of restructuring efforts.

Teamwork

Based on the case studies of the four partner-sites, it appears that teamwork is a critical element in most successful restructuring initiatives. The partner-sites that have been the most successful at implementing and evaluating restructuring efforts have been those that have worked at developing teams within the school that extend beyond traditional departmental or administrative-teacher divisions. In addition, the partner-sites that have been the most successful at implementing restructuring efforts make connections with individuals outside of the school yard such as parents and representatives from the community, including business and civic leaders. Without each of these constituency groups working in concert with one another, the orchestration required to successfully implement educational restructuring initiatives will be difficult to achieve.

Pressure To Restructure

The case studies of the four partner-sites provide clear examples of school district administrators and individual school building faculty working together to successful restructure comprehensive high schools to better serve diverse student populations. In each of the case studies, it is difficult to determine whether the restructuring activities initiated with building-level faculty or administration or with district-level administration. We believe this is a positive example of shared governance requiring both school-level and district-level personnel to refine their roles and responsibilities.

It is our opinion that successful restructuring efforts require support from both the building faculty and administration as well as the district administration. If restructuring activities come solely to the school from the district in a traditional top-down approach to school governance, it is likely that faculty at the school building will not completely support or buy into the efforts. Similarly, restructuring efforts that are completely generated at the building level without district-level support may also fail.

Ongoing Process

Restructuring activities, once undertaken, appear never to end. Faculty from each of the partner-sites echoed this revelation during our site visits. They realized that restructuring is never finalized and that, once a particular initiative is developed and implemented, it must be formatively assessed and altered to better meet the needs of students and to address previously discussed unforeseen barriers that inevitably arise. If this finding is generalizable, then every school should be embarking on a new restructuring task or tasks every year. The transient nature of our society and the rapidity of technological and cultural change may force schools to reinvent themselves on an annual basis. If this phenomena occurs, schools will have to possess the knowledge of how to change in a fraction of the time it currently takes educational systems to alter their form and function.

In regard to the second research question—how does vocational education fit into those restructuring efforts?—investigations at each site provided answers. At Bryan, restructuring began with the infusion of Perkins funding and the subsequent improvement of vocational education programs and development of integrated courses. Efforts continued with a major project intended to better prepare students for careers, a project that played the lead role in restructuring activities. At the Humboldt site, restructuring activities were built around Tech Prep and the International Studies and Careers programs. These efforts led to partnerships with area business and industry, higher education institutions, and other public school programs. At the Mayfield site, restructuring was based on the development of Tech Prep programs funded by the Perkins Act. Later efforts focused on school-to-work-related activities and the development of an academy for students in business careers. Finally, restructuring at the West Charlotte site was centered around the Tech Prep program, the integration of academic and vocational courses, and the implementation of a career planning portfolio program for all students.

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